

I. AMENDMENTS

AMENDMENTS TO THE CLAIMS

Cancel claim 2 without prejudice to renewal.

Please enter the amendments to claims 1, 3, and 4, as shown below.

Please enter new claims 18-24, as shown below.

1. **(Currently amended)** A method of treating irritable bowel syndrome (IBS) in an individual, the method comprising administering to the individual an effective amount of a therapeutic nucleic acid to reduce at least one symptom of IBS in the individual, wherein the therapeutic nucleic acid is non-coding, wherein the therapeutic nucleic acid is isolated or synthetic, and wherein the therapeutic nucleic acid comprises an unmethylated 5'-CG-3' nucleotide sequence.

2. **(Cancelled)**

3. **(Currently amended)** The method of claim 1 [[2]], wherein the therapeutic nucleic acid comprises a nucleotide sequence of the formula 5' (TCG)_n-3', where n is any integer that is 1 or greater.

4. **(Currently amended)** The method of claim 1 [[2]], wherein the therapeutic nucleic acid comprises a nucleotide sequence of the formula 5'-N_m-(TCG)_n-N_p-3', wherein N is any nucleotide, wherein m and p are independently zero or 1-200, and wherein n is any integer that is 1 or greater.

5. (Original) The method of claim 1, wherein the therapeutic nucleic acid is administered via a gastrointestinal route.

6. (Original) The method of claim 5, wherein the gastrointestinal route is oral, intranasal, intragastric or rectal.

7. (Original) The method of claim 1, wherein the therapeutic nucleic acid is administered by a systemic route.

8. (Original) The method of claim 7, wherein the systemic route is intradermal, intramuscular, subcutaneous or intravenous.

9. (Original) The method of claim 1, further comprising administering a serotonin 5HT₃ antagonist.

10. (Original) The method of claim 1, further comprising administering a laxative.

11. (Original) The method of claim 1, further comprising administering an antispasmodic agent.

12. (Original) The method of claim 1, further comprising administering an antidepressant.

13. (Original) The method of claim 1, further comprising administering an antidiarrheal agent.

14. (Original) The method of claim 1, wherein the therapeutic nucleic acid is formulated with at least one food-grade carrier.

15. (Original) The method of claim 14, wherein the food-grade carrier is selected from the group consisting of olive oil, an emulsifier, a soluble fiber, a flavoring agent, a coloring agent, an edible fiber, and a sweetener.

16. (Original) The method of claim 15, wherein the soluble fiber is selected from the group consisting of pectin, carrageenan, alginate, guar gum, locust bean gum, psyllium, xanthan gum, gum arabic, fructo-oligosaccharides, inulin, and agar.

17. (Original) The method of claim 15, wherein the emulsifier is selected from the group consisting of propylene glycol monostearate, sodium stearyl lactylate, calcium stearyl lactylate, a monoglyceride, a diglyceride, a mono-diglyceride a polyglycerol ester, a lactic acid ester, polysorbate, a

sucrose ester, a diacetyl tartaric acid ester of mono-diglycerides, a citric acid ester of monoglycerides, DIMODAN™, GRINDSTED™, and RYLO™.

18. (New) The method of claim 1, wherein the individual is a human.

19. (New) The method of claim 1, wherein the therapeutic nucleic acid has a length of from about 10 nucleotides to about 200 nucleotides.

20. (New) The method of claim 1, wherein the therapeutic nucleic acid comprises a backbone phosphate group modification.

21. (New) The method of claim 20, wherein the therapeutic nucleic acid comprises a phosphoroamidate or phosphorothioate internucleotide linkage.

22. (New) The method of claim 1, wherein the therapeutic nucleic acid is complexed with or encapsulated by a microcarrier.

23. (New) The method of claim 1, wherein the therapeutic nucleic acid is linked to an insoluble support.

24. (New) The method of claim 23, wherein the insoluble support is cationic poly(D,L-lactide-co-glycolide).